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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,369	06/05/2001	Kengo Ochi	2309/OJ434	7467

7590 10/27/2004

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EXAMINER

SMITH, KIMBERLY S

ART UNIT PAPER NUMBER

3644

DATE MAILED: 10/27/2004

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/875,369  
Filing Date: June 05, 2001  
Appellant(s): OCHI ET AL.

MAILED

OCT 27 2004

GROUP 3600

\_\_\_\_\_  
Dianna Goldenson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/30/04.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

An amendment after final was submitted on June 16, 2004. This amendment after final has not been entered as per the Advisory Action dated July 27, 2004. All other after final amendments addressed in the appeal brief and their status are correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: the Appellant has argued issue (d) directed to claim 4 being non-obvious.

**(7) *Grouping of Claims***

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because claims 1-3, 5 and 7-12 are argued to stand or fall together. However,

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the Appellant has argued claim 4 should stand or fall on its own merits. This is disagreed with because claim 12 encompasses all claimed limitations of claim 4 and therefore should stand or fall with claims 1-3, 5 and 7-12.

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

JP 11-032608	SASAHARA	9-1999
6,405,677	McPHERSON et al.	6-2002
5,209,185	CHIKAZAWA	5-1993

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasahara, JP 11-032608 in view of McPherson et al., US Patent 6,405,677 (McPherson).

Sasahara discloses an animal excretion-treating material comprising particles having a core layer of fibers and a skin layer containing starch (i.e. a known water absorbing polymer powder) and fibers (paragraph 0010). However, Sasahara does not positively disclose the use of alpha-starches. McPherson teaches within the same field of endeavor that the use of  $\alpha$ -starch (i.e. pre-gelatinized starches) as the starch component of litter to effect adhesion between particles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use alpha-starch, since it has been held to be within the general skill of a worker in the art to select a known material (reference McPherson, column 4, lines 54-56 stating that prior art litters employ modified, pre-gelatinized starches) on the basis of its suitability for

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the intended use (i.e. for the adhesion of particles to each other) as a matter of obvious design choice.

Sasahara further discloses the fibers in the core layer and skin layer are those of pulp; wherein the bulk density falls between 0.1 and 0.5 (paragraph 0026); wherein the particle has a diameter between 2 and 20 mm (paragraph 0009).

Regarding claim 4, Sasahara as modified discloses the skin layer in a ratio of alpha starch to fiber in a range of 20 to 80 and 80 to 20 (i.e. paragraph [0009] states a 1 to 2 ratio to which a range of 33.3 and 66.6 would fall within the claimed range while maintaining the disclosed ratio).

Regarding claims 2 and 3, Sasahara discloses the invention substantially as claimed. However, Sasahara does not positively disclose that the skin layer fibers have a length between .02 to 1 mm or that the particle size of the starch in the skin layer is at most .25mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to find the optimal values of the fiber length and the particle size, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claims 10 and 13, Sasahara as modified further discloses the material being flushable in a toilet (paragraph [0029] of Sasahara).

Regarding claim 11, Sasahara as modified discloses the alpha starch being contained only in the skin layer.

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Regarding claim 12, Sasahara as modified is considered to be biodegradable in a septic tank as it is merely composed of fiber and starches. Further regarding claim 12, reference discussion of claims 2 and 4 above.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasahara in view of McPherson et al., as applied to claim 1 above, and further in view of Chikazawa, US Patent 5,209,185.

Sasahara as modified discloses the invention substantially as claimed. However, Sasahara does not disclose the starch being tapioca. Chikazawa teaches within the same field of endeavor the use of tapioca as a starch in an artificial litter. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use tapioca as a starch for pre-gelatinization as taught by Sasahara as modified, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

**(11) *Response to Argument***

**(a)** It should be noted that through the prosecution history of the case, the Examiner has asked for clarification for what the Appellant has deemed the term  $\alpha$ -starch to encompass. Reference is drawn to the Final Rejection dated 8/28/02, paragraph 1 where the question was posed as to whether the  $\alpha$ -starch is in reference to a position on a chemical chain. As such concise clarification was not presented nor the specification amended to reflect such clarification, the Appellant's arguments currently presented are more specific than the disclosed specification should permit.

Regarding the Appellant's arguments beginning on the last paragraph of page 6. The Appellant's agree that Sasahara discloses a compressed core formed from fibers and a coating layer formed from a combination of organic fiber powder and "water absorbing polymer powder, such as polyvinyl alcohol, carboxymethyl cellulose or hydroxyethyl cellulose *or the like*". As such, the claim limitation regarding each particle being composed of a core layer of fibers (i.e. the compressed core formed from fibers), a skin layer to cover the core layer (i.e. a coating) and the skin layer containing fibers (i.e. organic fiber powder) are positively disclosed. Therefore, the question becomes whether Sasahara discloses the use of an  $\alpha$ -starch or the suggestion of a reasonable expectation of success with the use of an  $\alpha$ -starch as per an obviousness rationale under 35 U.S.C. 103. The Appellant argues at the last paragraph of page 7 of the Appeal Brief "Carboxymethyl cellulose and hydroxyethyl cellulose differ significantly from  $\alpha$ -starch based on their chemical structures as well". The question that must be asked is, given the specification of the original application, what would be obvious to one with ordinary skill in the art and what one would find as a functional equivalent thereof. There is no argument to the fact that Sasahara discloses the use of cellulose in the skin layer. *Merriam-Webster's Tenth Edition Collegiate Dictionary* defines the term "cellulose" as a polysaccharide having a chemical composition of  $(C_6H_{10}O_5)_n$ . The Appellant has shown that in submitted Exhibit B that  $\alpha$ -starch has the chemical structure of  $(C_6H_{10}O_5)_n$ . Given no direction or further clarification from the specification to the criticality of what the Appellant deems a  $\alpha$ -starch, one with ordinary skill in the art would find it obvious to use a function equivalent thereof. *In re Leshin*, 125 USPQ 416. Reference is again drawn to Exhibit B where information generally available to one of ordinary skill in the art

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relates the  $\alpha$ -starch as being synonymous with a general starch having the chemical composition  $(C_6H_{10}O_5)_n$  which is inclusive of the cellulose as disclosed by Sasahara.

Regarding the Appellant's arguments starting on the first full paragraph of page 8 regarding "Sasahara also fails to disclose that its material agglomerates or clumps together..." As the material agglomerating or clumping together is not a claimed limitation, no response to the arguments is deemed necessary.

Regarding the Appellant's arguments starting at the middle of page 9 of the Appeal Brief. Reference is drawn to M.P.E.P 2123 where it is noted that patents are relevant as prior art for all they contain. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which ~~the~~ they are concerned. They are part of the literature of the art, relevant for all they contain" The Appellant's are arguing portions of the McPherson reference that were not relied upon as a basis of the rejection. As was stated in previous actions, McPherson is cited for what is discussed at column 4, lines 54-56, that being "Prior art litters employ modified, pre-gelatinized starches to effect adhesion between particles of litter..." The McPherson reference was solely relied upon for showing that one with ordinary skill in the art would look to a modified, pre-gelatinized starch to capture moisture as required by Sasahara (as the Appellant's stated in the prosecution history, while never amending the specification, that they deem an  $\alpha$ -starch to be a modified, pre-gelatinized starch). Claims 1-5 and 7-12 are considered obvious over Sasahara in view of McPherson as McPherson does disclose that the use of a modified, pre-gelatinized starch (i.e.  $\alpha$ -starch) is a known material employed in the prior art for the absorption of liquid to affect adhesion between particles of litter which is an objective of the material in the outer layer of the particles disclosed by Sasahara.



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Again it is noted that Sasahara discloses the use of “water absorbing polymer powder, such as....*or the like*.” It has been held to be within the general skill of a worker in the art to select a known material (i.e. a modified, pre-gelatinized starch as taught by McPherson) on the basis of its suitability for the intended use (i.e. absorption of liquid) as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

(b) As with claims 1-5 and 7-12 discussed above, the question that must be asked is what one with ordinary skill in the art would glean from the specification of the instant application and what reasonable equivalents would be suggested thereby. Claim 6 includes the limitation wherein the  $\alpha$ -starch is a tapioca  $\alpha$ -starch. Reference is directed above to the discussion under issue (a) regarding the use of the term  $\alpha$ -starch. Attention is again drawn to Exhibit B in which  $\alpha$ -starch is not only considered synonymous with starch but also synonymous with Tapioca starch. Given the availability of this information to one having ordinary skill in the art, lacking any direction from the specification regarding the precise nature of what the Appellant considers an  $\alpha$ -starch, the claims must be interpreted as broadly as their terms reasonably allow (MPEP 2111.01). As Sasahara discloses the use of cellulose in the outer layer which has a chemical formula of  $(C_6H_{10}O_5)_n$  and Exhibit B provides the basis for the chemical formula  $(C_6H_{10}O_5)_n$  to be consistent with an alpha starch, Sasahara could reasonably convey on its own disclosure the claimed invention as interpreted as broadly as their term reasonably allows. Chikazawa is cited to show that tapioca starch is a known material in the art of litter compositions that is used for the absorption of liquid. With reference again drawn to Exhibit B in which it is stated that Tapioca starch is synonymous with  $\alpha$ -starch which is synonymous with a starch having the general chemical formula  $(C_6H_{10}O_5)_n$  it is considered to be within the ordinary skill of an artisan

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in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. As tapioca starch is synonymous with  $\alpha$ -starch which is also synonymous with any starch having the chemical formula  $(C_6H_{10}O_5)_n$  one with skill in the art would find it obvious to substitute any one of the equivalents for another known equivalent in light of the teaching by Chikazawa, that being tapioca starches are known to absorb liquid in litter compositions.

(c) The rejection to Claim 13 is Moot

(d) Regarding the Appellant's arguments that the references cited do not recite a specific range of ratios of  $\alpha$ -starch to fibers in the skin layer which allows for the promotion of agglomeration. The limitation of agglomeration has not been positively claimed and further discussion regarding the arguments is not considered necessary. It is however noted that Sasahara discloses the skin layer in the ratio of starch to fiber in the range of 20:80 to 80:20 (i.e paragraph [0009] states a 1 to 2 ratio to which a range of 33.3 and 66.6 would fall within the claimed range while maintaining the disclosed ration).

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

kss

September 13, 2004

Conferees

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**TERI P. LUU**  
**SUPERVISORY PRIMARY EXAMINER**

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